

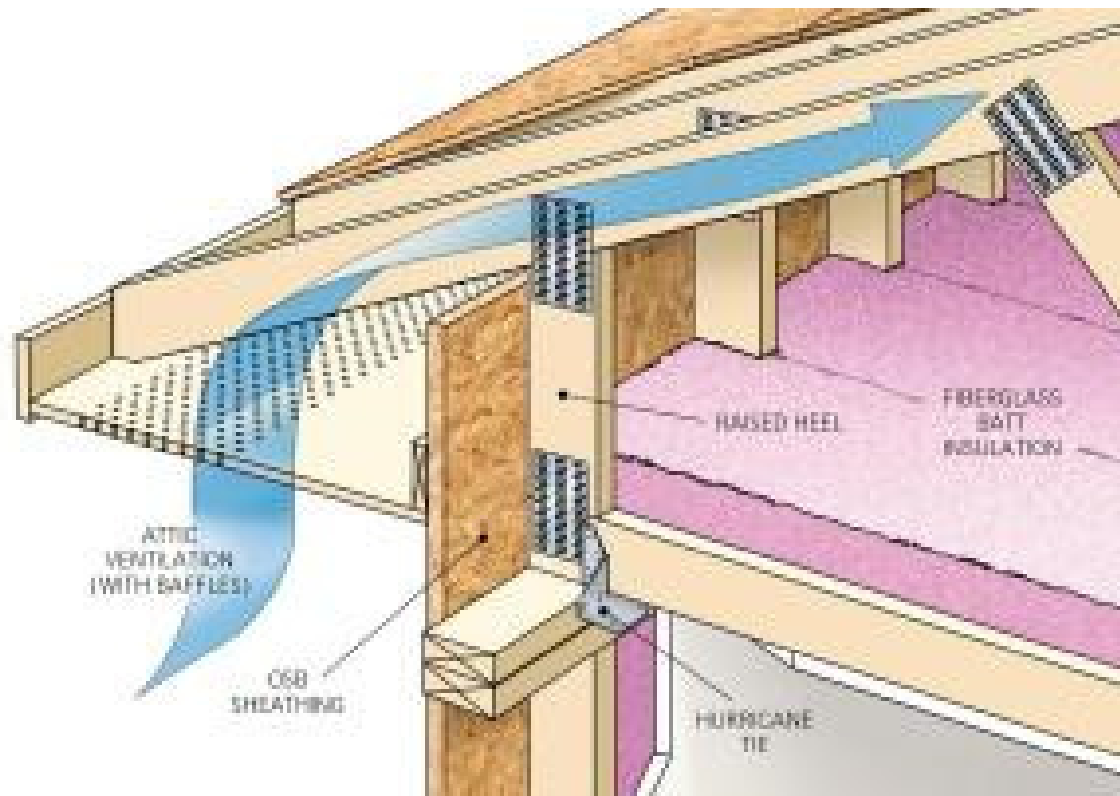
2018 Insulation & Air Sealing Requirements IRC

Crossville
&
Cumberland County

Insulation & Fenestration Requirements

		Residential Energy Requirements									
						WOOD FRAME WALL			BASEMENT ^c WALL	SLAB ^d	CRAWL SPACE ^c WALL
	CLIMATE ZONE	FENESTRATION	SKYLIGHT ^b	GLAZED FENESTRATION SHGC ^{b, e}	CEILING	R-VALUE	MASS WALL	FLOOR R- VALUE	R-VALUE	R- VALUE	R-VALUE
		U-FACTOR ^b	U-FACTOR		R-VALUE		R-VALUE ⁱ			& DEPTH	
City & County Requirements 2009 IRC	4 except Marine	0.35	0.6	NR	38	13	5 / 10	19	10 / 13	10, 2 ft	10 / 13

Raised Heel or Energy Truss (Recommended not Required)



2009 IECC TABLE 402.4.2 (2018 N1102.4.1.1) AIR BARRIER AND INSULATION INSTALLATION

COMPONENT

CRITERIA

1. Air barrier and thermal barrier

Exterior thermal envelope insulation for framed walls is installed in substantial contact and continuous alignment with building envelope air barrier. Breaks or joints in the air barrier are filled or repaired. Air-permeable insulation is not used as a sealing material. Air-permeable insulation is inside of an air barrier.

2. Ceiling/attic

Air barrier in any dropped ceiling/soffit shall be aligned with the insulation and any gaps in the air barrier sealed.

Attic access , knee wall door, or drop down stair shall be sealed.

3. Walls

Corners and headers are insulated.

Junction of foundation and sill plate is sealed.

4. Windows and doors

The space between window/door jambs and framing is sealed.

5. Rim joists

Rim joists shall be insulated and include an air barrier.

6. Floors

(including above-garage and cantilevered floors)

Insulation shall be installed to maintain permanent contact with underside of subfloor decking.

The air barrier shall be installed at any exposed edge of insulation.

7. Crawl space walls

Where provided in lieu of floor insulation, insulation shall be permanently attached to the crawlspace walls. Exposed earth in unvented crawl spaces shall be covered with a Class I vapor retarder with overlapping joints taped.

8. Shafts, penetrations

Duct shafts, utility penetrations, and flue shafts opening to exterior or unconditioned space shall be sealed.

9. Narrow cavities

Batts in narrow cavities shall be cut to fit, or narrow cavities shall be filled by insulation that on installation readily conforms to the available cavity space.

10. Garage separation

Air sealing shall be provided between the garage and conditioned spaces.

11. Recessed lighting

Recessed light fixtures installed in the building thermal envelope shall be air tight, IC rated, and sealed to the drywall.

12. Plumbing and wiring

13. Shower/tub on exterior wall

Showers and tubs on exterior walls have insulation and an air barrier separating them from the exterior wall.

14. Electrical/phone box on exterior walls

The air barrier shall be installed behind electrical or communication boxes or air sealed boxes shall be installed.

15. HVAC register boots

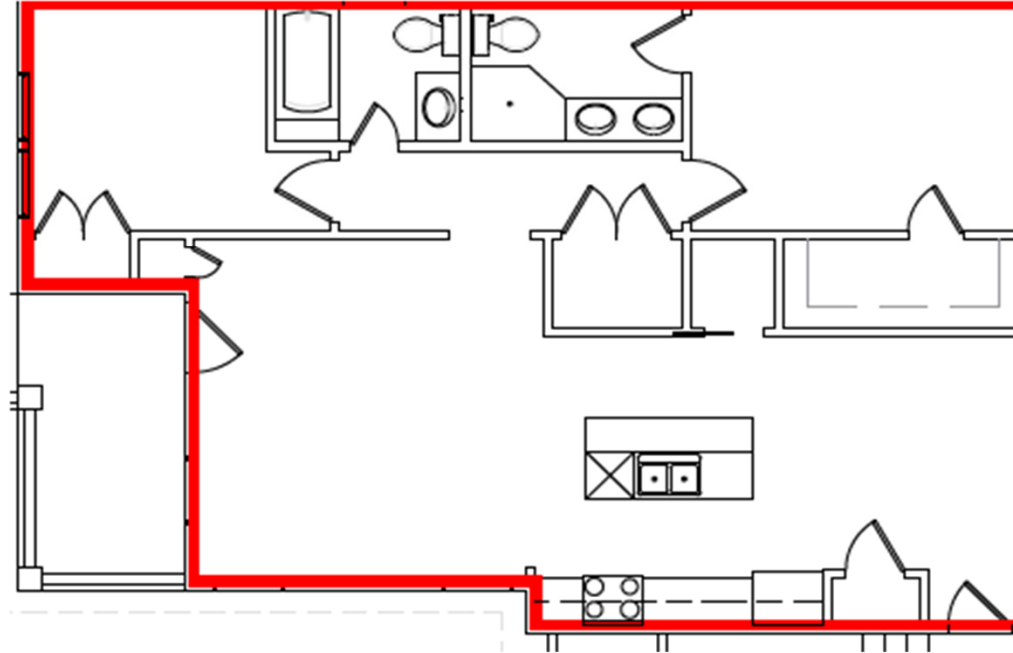
HVAC register boots that penetrate building thermal envelope shall be sealed to the subfloor or drywall.

2009 IECC TABLE 402.4.2 (2018 N1102.4.1.1) AIR BARRIER AND INSULATION INSTALLATION

Exterior thermal envelope insulation for framed walls is installed in substantial contact and continuous alignment with building envelope air barrier. Breaks or joints in the air barrier are filled or repaired.

Air-permeable insulation is not used as a sealing material. Air-permeable insulation is inside of an air barrier.

1. Air barrier and thermal barrier



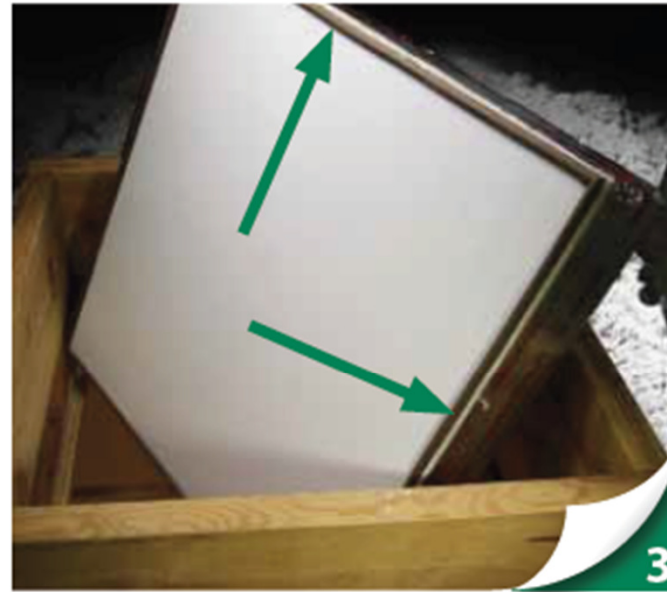
2. Ceiling/attic

Air barrier in any dropped ceiling/soffit shall be aligned with the insulation and any gaps in the air barrier sealed.

Attic access , knee wall door, or drop down stair shall be sealed.



Install dams around access holes to protect the surrounding insulation.



Install weatherstripping on access trim. Verify seal.

3. Walls

Corners and headers are insulated.
Junction of foundation and sill plate is sealed.



Ladder blocking allows for insulation behind the wall intersection.



Full length 2 X 6 nailer had been installed to allow space for insulation at wall intersection.

4. Windows and doors

The space between window/door jambs and framing is sealed.



5. Rim joists

Rim joists shall be insulated and include an air barrier.



6. Floors

(including above-garage and cantilevered floors)

Insulation shall be installed to maintain permanent contact with underside of subfloor decking.

The air barrier shall be installed at any exposed edge of insulation.



7. Crawl space walls

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Batts in narrow cavities shall be cut to fit, or narrow cavities shall be filled by insulation that on installation readily conforms to the available cavity space.

10. Garage separation

Air sealing shall be provided between the garage and conditioned spaces.

11. Recessed lighting

Recessed light fixtures installed in the building thermal envelope shall be air tight, IC rated, and sealed to the drywall.

12. Plumbing and wiring

Air sealing shall be provided.

- 13. Shower/tub on exterior wall** Showers and tubs on exterior walls have insulation and an air barrier separating them from the exterior wall.

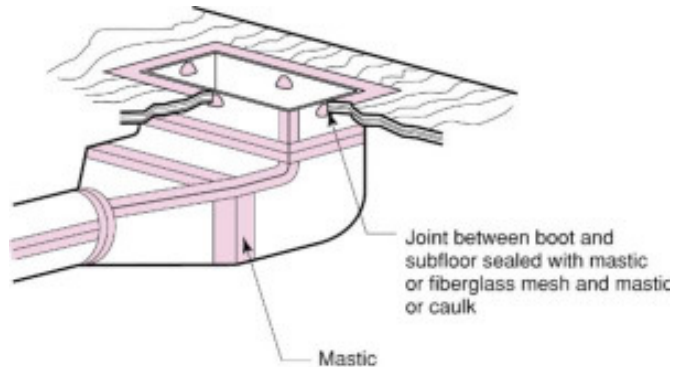


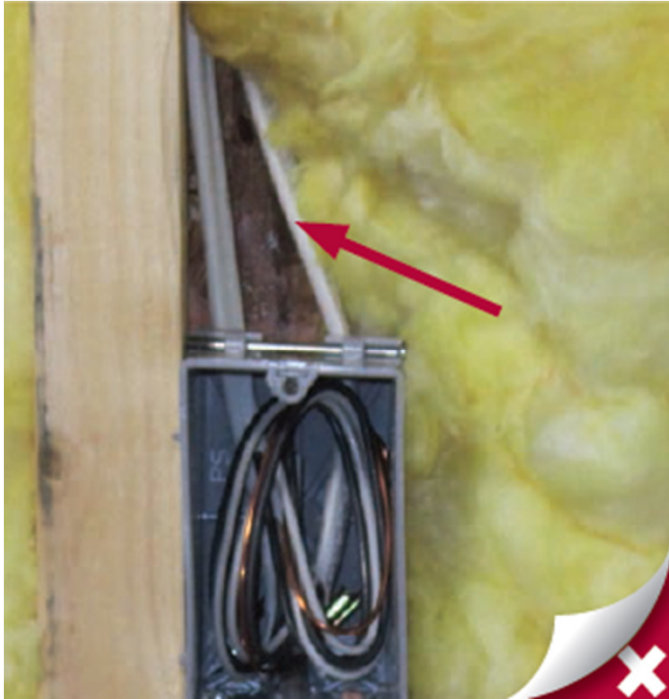
Air barrier installed behind shower stall.

14. Electrical/phone box on exterior walls The air barrier shall be installed behind electrical or communication boxes or air sealed boxes shall be installed.

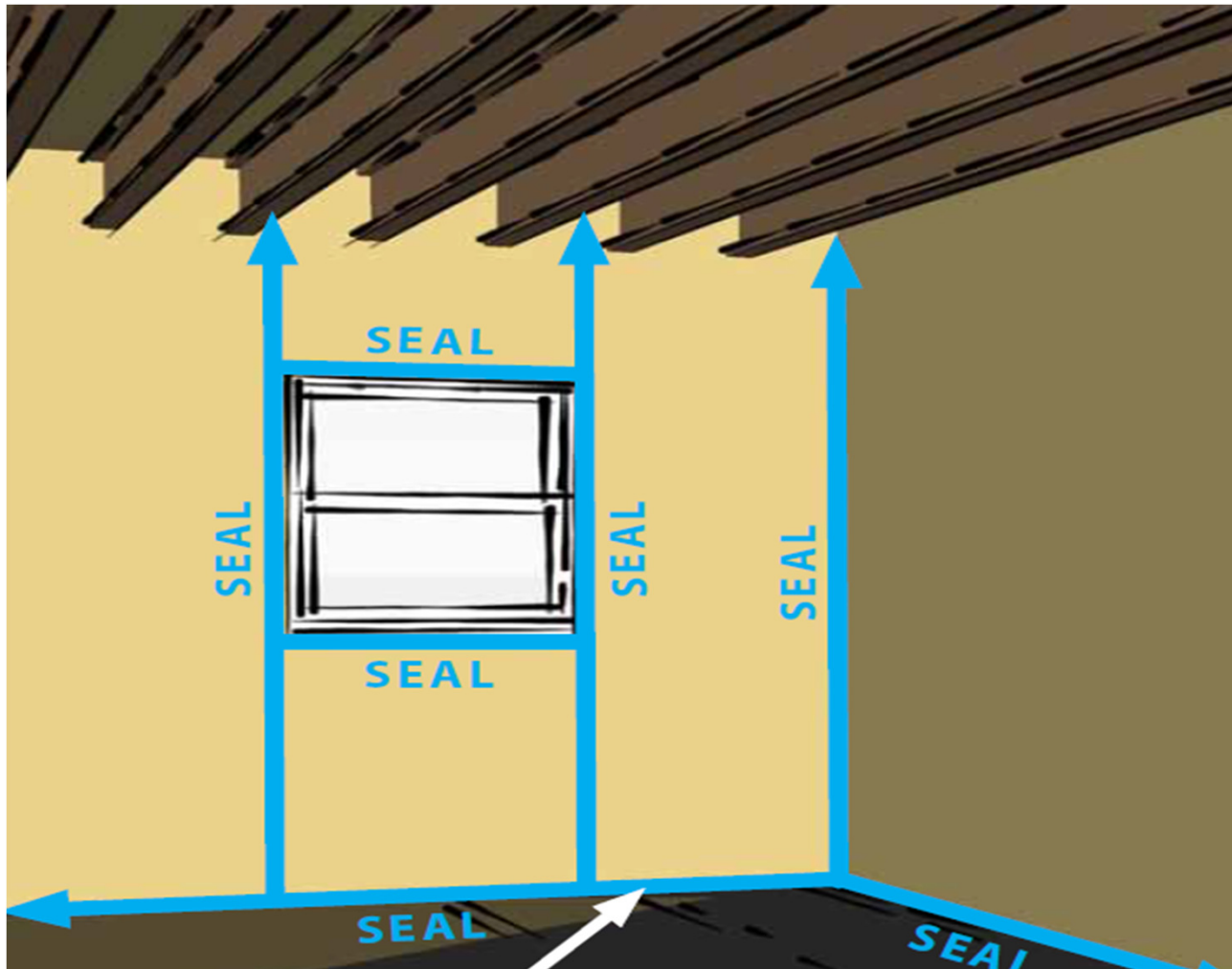
15. HVAC register boots

HVAC register boots that penetrate building thermal envelope shall be sealed to the subfloor or drywall.









Air seal inspection will be at rough-in inspection

Insulation inspection to be completed after wall insulation is installed. This will be an added inspection to verify proper installation.